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(54) Title: **HOMOLOGOUS RECOMBINATION IN MULTIPOTENT ADULT PROGENITOR CELLS**

(57) Abstract: The invention relates to methods of altering gene expression by homologous recombination in a multipotent adult progenitor cell (MAPC). In particular, methods of producing a recombinant MAPC, of correcting a genetic defect in a mammal, of providing a functional and/or therapeutic protein to a mammal, and of transforming a MAPC are provided. MAPCs containing an exogenous DNA as well as recombinant MAPCs and their differentiated progeny are also provided.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38811

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12N 15/85; A61K 48/00

US CL : 435/325; 514/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/325; 514/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
STN: EMBASE BIOSIS CAPLUS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Database EMBASE on STN, LAKSHMIPATHY, U et al. 'A Non-viral Method for Efficient Transfection of Embryonic and Adult Stem Cells.' Blood, 16 November 2003, Vol. 102, No. 11, pp. 492b, see Abstract.	1-20



Further documents are listed in the continuation of Box C.



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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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